UNIT II

RCM PROCESS

Module 1

RCM PROCESS OVERVIEW

RCM PROCESS OVERVIEW

Topics:

Introduction

- **Introduction**
- **RCM Process**
- **Review and Summary**

RCM PROCESS OVERVIEW

Module Objective:

Introduction

This module will provide an overview of the overall RCM process including the basic elements of an RCM effort.

RCM PROCESS OVERVIEW

PLANNING AND PREPARATION

1. Identify Team and responsibilities Process
2. Identify analysis items
3. Prioritize Items
4. Identify and document Review
5. Orientation/Training
6. Ground Rules and Assumptions

ANALYSIS

1. Equipment Kick-off Meeting
2. Initial Data Gathering
3. Hardware Partitioning
4. Function
5. Functional Failure
6. Failure Mode
7. Failure Effects
8. Failure Consequences
9. Task Evaluation
10. Task Selection

FMECA

SAE JA-1011

IMPLEMENT RESULTS

1. Package Maintenance Task
2. Implement Onetime Tasks

SUSTAIN

1. Emergent Issues
2. Age Exploration
3. Hardware Changes
4. Trend/degrader analysis
5. Document Reviews

Results

- Analysis Approach/ RCM Plan
- Maintenance Requirements
- Maintenance Program
- Data

RCM PROCESS OVERVIEW

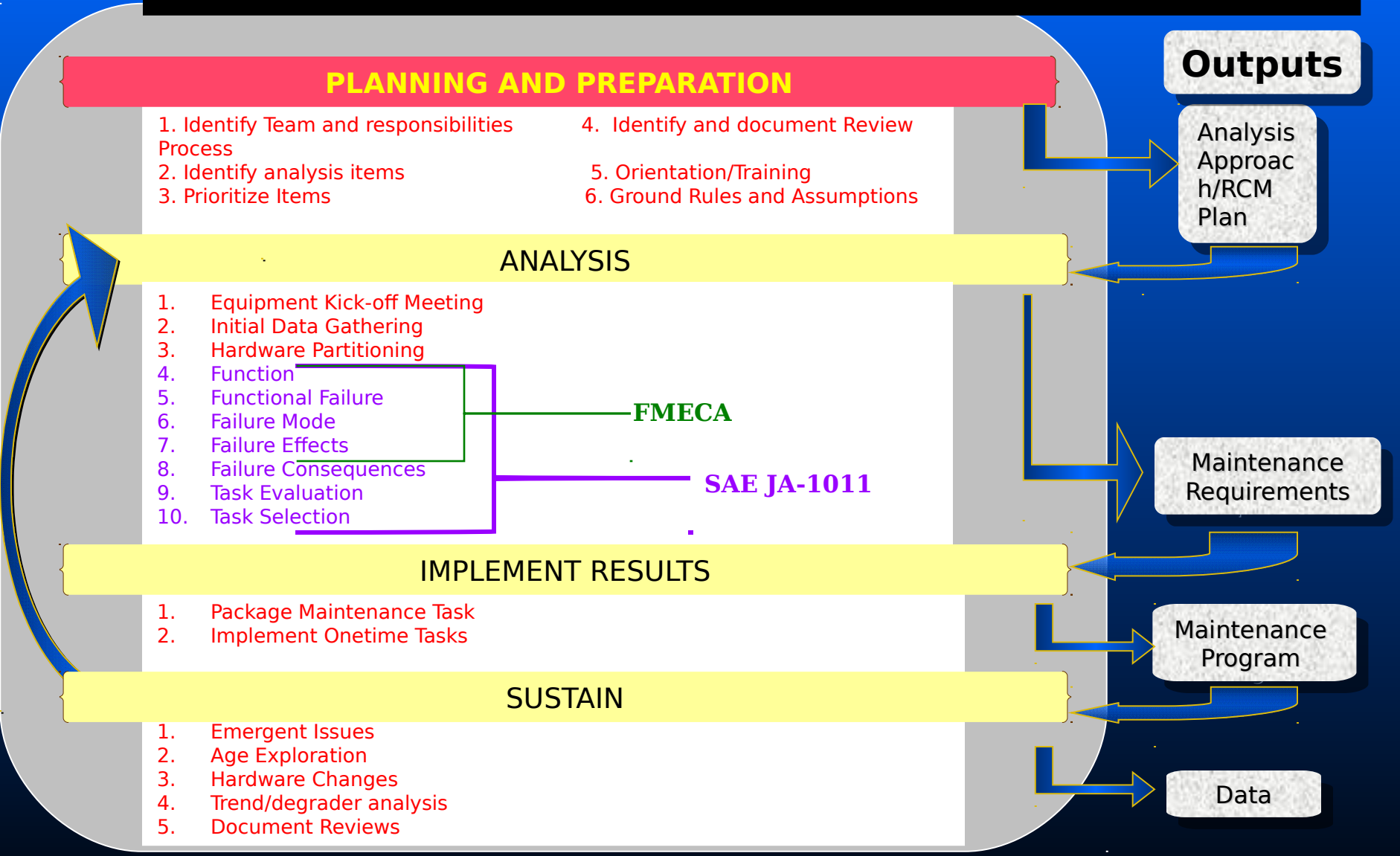
Elements:

RCM Process

The four basic elements of an RCM Program:

1. **Planning and Preparation**
2. **Initial RCM Analysis**
3. **Implementation of Results**
4. **Sustaining the Analysis**

RCM PROCESS OVERVIEW



RCM PROCESS OVERVIEW

Planning and Preparation:

RCM Process

- **Identifies and resolves issues that must be addressed prior to beginning an analysis.**
- **Answers:**
  - **Who**
  - **What**
  - **In what order**
  - **How**
  - **With what resources**
  - **When**
- **Planning and preparation will be covered in detail in the next module…**

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RCM Analysis:

RCM Process

Once an asset has been selected for analysis and the proper groundwork has been accomplished, the analysis phase begins.

Analysis Steps:

- **Equipment Kick-off Meeting**
- **Initial Data gathering**
- **Hardware Partitioning**
- **FMECA**
- **Failure Consequences**
- **Task Evaluation**
- **Task Selection**

RCM PROCESS OVERVIEW

RCM Analysis: **RCM Process**

Two "preliminary" steps in the Analysis Process:

- **Equipment Kick-off meeting**
  - Include key persons associated with item being analyzed
  - Necessary to facilitate transfer of information from SME's
  - Critical for "buy-in"
  - Doesn't have to be formal
  - Provides a detailed overview of the process: what is expected of participants and how it will benefit them (if not done in the initial "Orientation/Training" session)
- **Data Gathering**
  - Acquiring data such as pubs, logs, 3M/CMMS access, etc. prior to beginning analytical work makes the analysis proceed faster and more efficiently

RCM PROCESS OVERVIEW

FMECA:

RCM Process

For the purposes of this course, FMECA refers to the determination of functions, functional failures, failure modes, failure effects, and failure rates to the extent required for RCM analysis of a selected item.

Does not intend to imply that a full FMEA or FMECA as defined for design or other processes is required to perform RCM...

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Implementing the Results: **RCM Process**

When complete, the RCM analysis provides a list of maintenance tasks and recommendations.

In order to realize the benefits of these recommendations, they need to be incorporated into a coherent and efficient maintenance program.

"Packaging" is the process of combining discrete maintenance recommendations into a maintenance program.

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Sustaining the analysis:

RCM Process

As with many other processes, a large part of the benefit of RCM may be realized over time through a process of formal monitoring and continuous improvement…

Initial analysis may need update over time:

- **Incorrect assumptions on initial analysis**
- **Hardware changes**
- **Unexpected failures**
- **Operating environment changes**

RCM PROCESS OVERVIEW

Review and Summary

Module Objective

- **Familiarized you with the overall RCM process**

- **Introduction**
  - **Learning Objectives**
- **RCM Process**
  - **Planning and Preparation**
  - **Analysis**
  - **Implementation**
  - **Sustaining**

End of Module

up next.....

Planning and Preparation